# 2019 Water Quality Report

Manager: Tim Wilkerson

## Munfordville Municipal Water & Sewer

Contact: Tim Wilkerson Phone: (270) 524-5701

KY0500305

Address: P.O. Box 85 Munfordville, Ky. 42765

Meetings: City Hall 111 Main Street, Munfordville 1st Monday of each month 6:00pm cst

We purchase our water exclusivly from Green River Valley Water District. They treat surface water from the Green River and Rio Springs in Canmer Kentucky. The following is the Summary for the Green River Valley Water District: The source of raw water for the Green River Valley Water District is the Green River and Rio Springs in Hart County. An analysis of the overall susceptibility to contamination of the Green River Valley Water District's water supply indicated that this susceptibility is high. Sources of high potential impact include: Highway 31E and Route 569, underground storage tanks, agricultural land use, domestic water wells, and septic systems. This source assessment for GRVWD raw water supply is available through Barren River Development District P.O. Box 90005, Bowling Green, Ky., 42102, (270) 781-2381, Green River Valley Water District 85 East Les Turner Road Cave City Kentucky42127/ General Manager David Paige (270) 773-2135 or at Munfordville City Hall 111 Main Street Munfordville, Kentucky 42765/ Superintendent Tim Wilkerson (270) 524-5701.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your local public water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

### Some or all of these definitions may be found in this report:

Maximum Contaminant Level (MCL) - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health.

MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Below Detection Levels (BDL) - laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Copies of this report are

available upon request by contacting our office during business hours. A= Green River Valley Water District, B=

Munfordville Municipal Water & Sewer

Munfordville Municipal Water & Sewer  Regulated Contaminant Test Results Munfordville Municipal Water & Sewer												
Regulated Contaminar	t Test Re	sults	I	Munford	lville M	lun	icipal Wa	ater & Se	wer			
Contaminant			Source	Report			Date of Violation		Likely Source of			
[code] (units)	MCL	MCLG	oS	Level			Sample		Contamination			
Inorganic Contaminan	ts			-	-				•			
Barium [1010] (ppm)	2	2	A=	0.032	0.032	to	0.032	2019	No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	A=	0.9	0.9	to	0.9	2019	No	Water additive which promotes strong teeth		
Nitrate [1040] (ppm)	10	10	A=	1.92	1.92	to	1.92	Feb-19	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits		
Disinfectants/Disinfect	ion Bypro	ducts and	Pre	cursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A=	1.29	1.00	to	2.92	2019	No	Naturally present in environment.		
*Monthly ratio is the % TOC r	emoval achie	ved to the %	TOC 1	removal requ	ired. Annua	al ave	erage must be	1.00 or greater	for complian	nce.		
Chlorine (ppm)	MRDL = 4	MRDLG = 4	В=	2.10 (highest average)	1.00	to	3.40	2019	No	Water additive used to control microbes.		
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	В=	36 (average)	4 (range o	to f indi	72 ividual sites)	2019	No	Byproduct of drinking water disinfection		
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	В=	52 (average)	25	to	94.9 ividual sites)	2019	No	Byproduct of drinking water disinfection.		
Household Plumbing C	ontamina	ants										
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	A=	0.058 (90 <sup>th</sup> percentile)	0.0033	to	0.309	Sept-17	No	Corrosion of household plumbing systems		
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	A=	2 (90 <sup>th</sup> percentile)	0	to	12	Sept-17	No	Corrosion of household plumbing systems		
Other Constituents												
Turbidity (NTU) TT	Allowable Levels		Source	Highest Single Measurement			Lowest	Violation	Likely Source of Turkidies			
* Representative samples Turbidity is a measure of the clarity of the water and not a contaminant.		an 1 NTU* .3 NTU in	A=	0.565		Monthly % 96	No	Likely Source of Turbidity  Soil runoff				

Unregulated Contaminants (UCMR 4)		average	verage range (ppb)			date
Manganese	A=	0.611	0.576	to	0.645	July-19
HAA5	A=	35.087	5.44	to	68.4	Oct-19
HAA6Br	A=	5.693	1.3	to	9.7	Oct-19
HAA9	A=	40.788	6.76	to	75.8	Oct-19
1-butanol	A=	4.83	4.83	to	4.83	Oct-19

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

# This report will not be sent to individual customers. It will be available at City Hall.

#### Notice of Violation 2020 - 9950617 CHLORINE

Description of Non Compliance: 401 KAR 8: 020 & 8: 150 CHLORINE The public water system failed to submit the MOR with an adequate number of results for the disinfectant residual in the distribution system for the compliance 09 /01 /2019 - 09 /30 /2019. Comments: Failed to collect and report minimum daily chlorine residual samples throughout the distribution system (MOR page 7) for the September 2018 monitoring period. Remedial Measures: Submit the MOR, if available, to Division of Water. We now have the MOR on a calendar to ensure timely submittal.

## Notice of Violation 2020 - 9950616 MONTHLY OPERATING REPORT MOR

Description of Non Compliance: 401 KAR 8: 020 MONTHLY OPERATING REPORT The public water system failed to submit the MOR for the compliance period of 09 /01 /2019 -09 /30 /2019. Comments: System failed to submit MOR for September 2019 monitoring period. Remedial Measures: Submit MOR, if available, to Division of Water. We now have the MOR on a calendar to ensure timely submittal.

#### Notice of Violation 2019 - 9950615 CHLORINE

Description of Non Compliance: 401 KAR 8: 020 & 8: 150 CHLORINE The public water system failed to submit the MOR with an adequate number of results for the disinfectant residual in the distribution system for the compliance 09 /01 /2018 - 09 /30 /2018. Comments: Failed to collect and report minimum daily chlorine residual samples throughout the distribution system (MOR page 7) for the September 2018 monitoring period. Remedial Measures: Submit the MOR, if available, to Division of Water. We now have the MOR on a calendar to ensure timely submittal.

## Notice of Violation 2019 - 9950614 MONTHLY OPERATING REPORT MOR

Description of Non Compliance: 401 KAR 8: 020 MONTHLY OPERATING REPORT The public water system failed to submit the MOR for the compliance period of 09 /01 /2018 -09 /30 /2018. Comments: System failed to submit MOR for September 2018 monitoring period. Remedial Measures: Submit MOR, if available, to Division of Water. We now have the MOR on a calendar to ensure timely submittal.